#### IN THE SPECIFICATION

Please amend the paragraphs beginning at page 24, line 3 through page 36, line 3 to read as follows:

### Example XVI XVII (Invention)

A glass substrate is cleaned by first rinsing with tap water and LIQUINOX™ soap that is reduced to one part soap to 100 parts distilled water. The solution is applied to the wet substrate surface and cleaned with a soft brush using 3 to 5 pounds of pressure. The surface is rinsed first with tap water and then with distilled water. The substrate surface is deemed clean when distilled water rinses clear. The cleaned substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5 minutes to generate a first layer of Silicon Oxide, SiO<sub>x</sub> layer having an RMS surface roughness of at least 4mμ 4 nm and preferably less than about 6mμ 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS-SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS) are added in equivolume (one part to one part) amounts to the chamber for a total of 5 minutes. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes to then generate a crosslinked layer. The initial advancing contact angle is greater than 60 ° and greater than 45° after 300 Taber Cycles.



#### Example XVII XVIII (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The cleaned substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5 minutes to generate a first Silicon Oxide layer, SiO<sub>x</sub>, having an RMS surface roughness of at least 4mµ 4 nm and preferably less than about 6mμ 6 nm. The chamber is purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS- SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane are added to the chamber for a total of 5 minutes in ratios of DMDCS to MTCS of about 9 parts to 1 parts. The reaction chamber humidity is adjusted to about 14%, and held at a relatively constant humidity for about 5 minutes to then generate a crosslinked layer. The reaction chamber is subsequently evacuated and the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 70 ° and greater than 55° after 300 Taber Cycles.

### Example XVIII XIX (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The cleaned substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5



minutes to\_generate a first layer of Silicon Oxide, SiO<sub>x</sub>, having an RMS surface roughness of at least 4 nm and preferably less than about 6 mn nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS- SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS-SiCl<sub>3</sub>CH<sub>3</sub>) are added to the chamber for a total of 5 minutes in ratios of DMDCS to MTCS of about 3 part to 1 parts by weight. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes to then generate a crosslinked layer. The reaction chamber is subsequently evacuated after a final coating is applied, and the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 70 ° and greater than 55° after 300 Taber Cycles.

### Example XIX XX (Invention)

A glass substrate is cleaned using the procedure in Example-XVI XVII. The cleaned substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5 minutes to generate a first layer of SiO<sub>x</sub> having an RMS surface roughness of at least 4 nm and preferably less than about 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS- SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS-SiCl<sub>3</sub>CH<sub>3</sub>) are added to the chamber for a total of 5 minutes in ratios of DMDCS to MTCS



of about 1 to 3 parts by weight. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes to then generate a crosslinked layer. After an additional stabilization period of at least 30 seconds, additional methyltrichlorosilane (DMDCS) is introduced into the reaction chamber for an additional five minutes to provide a final capping layer. The reaction chamber is subsequently evacuated after a final coating is applied, and the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 105 ° and greater than 65° after 300 Taber Cycles.

### Example XX XXI (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure the stabilization of the humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5 minutes to generate a first layer having an RMS surface roughness of at least 4mu 4 nm and preferably less than about 6mµ 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS-SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS- SiCl<sub>3</sub>CH<sub>3</sub>), and Silicon Tetrachloride (SiCl<sub>4</sub>) are added in equimolar amounts to the chamber for a total of 5 minutes. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes. The reaction chamber is evacuated after a final coating is applied, following which the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 60° and greater than 45° after 300 Taber Cycles.



### Example XXI XXII (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure the stabilization of the humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5 minutes to generate a first layer having an RMS surface roughness of at least 4mu 4 nm and preferably less than about 6mµ 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS-SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS-SiCl<sub>3</sub>CH<sub>3</sub>), and Silicon Tetrachloride (SiCl4) are added in equimolar amounts to the chamber for a total of 5 minutes. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes. After an additional stabilization period of at least 30 seconds, to ensure humidity is correct and stable, additional methyltrichlorosilane is introduced into the reaction chamber for an additional five minutes to provide a capping layer. The reaction chamber is evacuated after a final coating is applied, following which the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 60 ° and greater than 45° after 300 Taber Cycles.

### Example XXII (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure the stabilization of the



> humidity within the reaction chamber, about 30 seconds, silicon tetrachloride (SiCl<sub>4</sub>) is introduced into the reaction chamber for about 5 minutes to generate a first layer having an RMS surface roughness of at least 4mµ 4 nm and preferably less than about 6mµ 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS-SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS-SiCl<sub>3</sub>CH<sub>3</sub>), and Silicon Tetrachloride (SiCl<sub>4</sub>) are added to the reaction chamber with the quantities of each reactant being a ratio of 1 parts DMDCS, 1 parts MTCS and 2 parts of SiCl<sub>4</sub> by weight added to the reaction chamber for a total of 5 minutes. The reaction chamber humidity is adjusted to about 14%, and held at a relatively constant humidity for about 5 minutes. After an additional stabilization period of at least 30 seconds to stabilize the humidity level methyltrichlorosilane is introduced into the reaction chamber for an additional five minutes to provide a capping layer. The reaction chamber is evacuated after the final coating is applied and the substrate is removed from the chamber. The initial advancing contact angle is greater than 60° and greater than 45° after 300 Taber Cycles.

### Example XXIII XXIV (Invention)

A glass substrate is cleaned using the procedure in Example-XVI XVII. The substrate is placed into a carrier and is blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. Chamber humidity is adjusted to 14%, and then held at that humidity for 5 minutes. After a stabilization period of 30 seconds, a mixture of 5 parts dimethyldichlorosilane (DMDCS) and one part trichloromethylsilane is introduced into the reaction chamber for 5 minutes. After an additional 30-second stabilization period, the gases are



exhausted from the chamber for 10 minutes, following which the substrate is removed from the chamber. FAS (B) is added and after 60-90 seconds of treatment, the glass substrate is cleaned with N-butanol. The initial advancing contact angle is greater than 100 ° and greater than 65° after 300 Taber Cycles.

### Example XXIV XXV (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The substrate is placed into a carrier and is blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. Chamber humidity is adjusted to 14%, and then held at that humidity for 5 minutes. After a stabilization period of 30 seconds, a trichloromethylsilane (TCMS) is introduced into the reaction chamber for 5 minutes to produce a surface layer having a surface roughness of from about 1 to 6 nm. RMS and a higher degree of hydrophobicity as measured by contact angle than a surface derived from purely SiCl<sub>4</sub>. After an additional 30-second stabilization period, the gases are exhausted from the chamber for 10 minutes, following which the substrate is removed from the chamber. FAS (B) is added and after 60-90 seconds, the glass substrate is cleaned with N-butanol. The initial advancing contact angle is greater than 100° and greater than 65° after 300 Taber Cycles.

### Example XXV XXVI (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber



> parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, trichloromethylsilane is introduced into the reaction chamber for about 5 minutes to generate a first layer of an SiO<sub>x</sub>Me<sub>v</sub> layer having an RMS surface roughness of about 1mμ 1 nm and preferably less than about 6mμ 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS- SiCl<sub>2</sub>Me<sub>2</sub>) and methyltrichlorosilane (MTCS-SiCl<sub>3</sub>CH<sub>3</sub>) are added in equimolar amounts to the chamber for a total of 5 minutes. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes to then generate a crosslinked layer. Optionally, after an additional stabilization period of at least 30 seconds, methyltrichlorosilane (MTCS) is introduced into the reaction chamber for an additional five minutes to provide a capping layer. The reaction chamber is subsequently evacuated after a final coating is applied, and the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 70° and greater than 50° after 300 Taber Cycles.

## Example XXVI XXVII (Invention)

A glass substrate is cleaned using the procedure in Example-XVI XVII. The substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, trichloromethylsilane is introduced into the reaction chamber for about 5 minutes to generate a first layer of an SiO<sub>x</sub>Me<sub>y</sub> layer having an RMS



surface roughness of about  $\frac{1}{1}$   $\frac{1}$   $\frac{1}{1}$   $\frac{1}{1}$   $\frac{1}{1}$   $\frac{1}{1}$   $\frac{1}{1}$   $\frac{1}{1}$ 

# Example XXVII XXVIII (Invention)

A glass substrate is cleaned using the procedure in Example XVI XVII. The substrate is placed into a carrier and blown dry using dried compress air. The cleaned substrate is placed into the reaction chamber parallel to the gas flow. After a period to ensure stabilization of the humidity within the reaction chamber, about 30 seconds, trichloromethylsilane is introduced into the reaction chamber for about 5 minutes to generate a first layer of an SiO<sub>x</sub>Me<sub>y</sub> layer having an RMS surface roughness of about 1 nm and preferably less than about 6 nm. The chamber is subsequently purged, and rehumidified to at least about 14 percent. After a 30-second stabilization period, dimethyldichlorosilane (DMDCS- SiCl<sub>2</sub>Me<sub>2</sub>) and Silicon Tetrachloride (SiCl<sub>4</sub>) are added in to the chamber for a total of 5 minute. The amount of each reactant is about 5



degree of durability or hydrophobicity or both desired. The reaction chamber humidity is adjusted to about 14%, and then held at a relatively constant humidity for about 5 minutes to then generate a crosslinked layer. After an additional stabilization period of at least 30 seconds, methyltrichlorosilane (DMDCS) is introduced into the reaction chamber for an additional five minutes to provide a capping layer. The reaction chamber is subsequently evacuated, and the coated substrate is removed from the chamber. The initial advancing contact angle is greater than 100°

and greater than 65° after 300 Taber Cycles.

parts to 1 part respectively (e.g. 5 DMDCS to 1 SiCl<sub>4</sub>) depending on the

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